

Claims.

1.- Improved method for separating gases from a gas mixture, whereby the gas mixture to be treated is led  
5 through a membrane separator (3) by means of a compressor installation (2) and whereby the compressed gas mixture to be treated is cooled in the compressor installation (2), among others in order to separate condensate from the gas mixture, after which, as it leaves the  
10 compressor installation (2), it will be re-heated before it ends up in the membrane separator (3), characterised in that, in order to re-heat the gas mixture to be treated as it leaves the compressor installation (2), use is made of the recuperation heat of the compressor  
15 installation (2) itself.

2.- Improved method according to claim 1, characterised in that in order to re-heat the gas mixture to be treated, use is made of the heat of the compressed gas mixture at the exit of a compressor element (4) of the  
20 compressor installation (2).

3.- Improved method according to claim 1 or 2, characterised in that in order to re-heat the gas mixture to be treated, use is made of the recuperation heat  
25 which is drawn from the gas mixture to be treated while cooling the gas mixture as mentioned above, among others in order to separate the condensate.

4.- Improved method according to any one of the preceding claims, characterised in that the compressor installation (2) comprises a compressor element (4) with liquid injection whose injected liquid is separated at the exit of the compressor element (4) concerned by a liquid separator (25), whereby the heat of the separated liquid is used to re-heat the gas mixture to be treated as it leaves the compressor installation (2).

5. - Improved method according to any one of the preceding claims, characterised in that the compressor installation (2) is equipped with a cooler in which a cooling medium is applied and whereby the recuperation heat of this cooling medium is used to re-heat the gas mixture to be treated as it leaves the compressor installation (2).

6.- Improved method according to any one of the preceding claims, characterised in that after the cooling of the gas mixture to be treated in the compressor installation (2) as mentioned above, the gas mixture is led through a dryer (23-33).

7.- Improved method according to claim 6, characterised in that the gas mixture is led through a dryer (23) on the basis of a desiccant.

8.- Improved method according to claim 6, characterised in that the gas mixture is led through a cool dryer (33).

9.- Improved method according to any one of the preceding claims, characterised in that after the cooling of the gas mixture to be treated in the compressor installation (2) as mentioned above, the gas mixture  
5 is led through a filter (32) or through a set of filters and adsorption elements.

10.- Improved device for separating gases from a gas mixture according to a method of any one of the preceding  
10 claims, which device (1) mainly consists of a compressor installation (2) having an inlet (7) and an outlet (9) for the gas mixture to be treated and a membrane separator (3) whose entry (15) is connected to the above-mentioned outlet (9) of the compressor installation (2) via a  
15 supply line (16), characterised in that a radiator (12-30) is incorporated in this supply line (16) through which the gas mixture to be treated flows and which is part of a heat exchanger (10-34-29) of the compressor installation (2) itself.

20 11.- Improved device according to claim 10, characterised in that the above-mentioned heat exchanger (10-34) is incorporated in a compressed air line (8) between the exit of a compressor element (4) and the exit (9) of the compressor installation (2).

25 12.- Improved device according to claim 11, characterised in that the above-mentioned heat exchanger (34) is a cooler which is part of a cool dryer (33) of the compressor installation (2).

13.- Improved device according to claim 10, characterised in that the compressor installation (2) comprises a compressor element (4) with liquid injection and a liquid separator (25) incorporated in the above-mentioned compressed air line (8) at the exit of the compressor element (4) concerned and whose exit is connected to the liquid injection system (27) of the compressor element (4) via a return line (26), and whereby the above-mentioned heat exchanger (29) is incorporated in said return line (26).

14.- Improved device according to claim 10, characterised in that the compressor installation (2) is equipped with at least one cooling circuit (21) and in that the above-mentioned heat exchanger (10) in the supply line (16) to the membrane separator (3) is part of this cooling circuit (21).